

Application No. 10/077,036
Amendment dated September 29, 2003
Reply to Office Action of May 27, 2003

IN THE DRAWINGS

Please accept the attached changes to the Figures to clarify the title of Applicants' application.

METHOD AND APPARATUS FOR COMPENSATING WAVEFORMS, SPECTRA,
AND PROFILES DERIVED THEREFROM FOR EFFECTS OF DRIFTParker et al.
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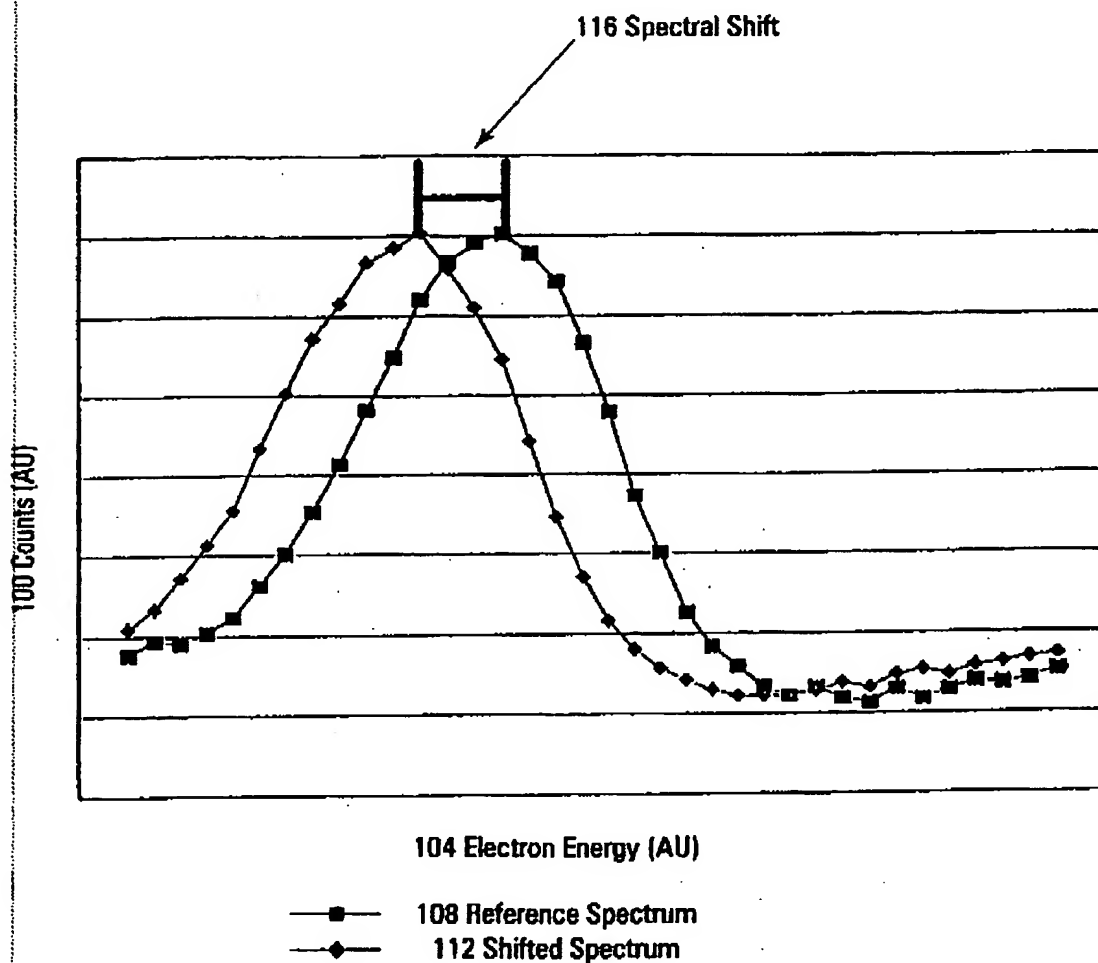
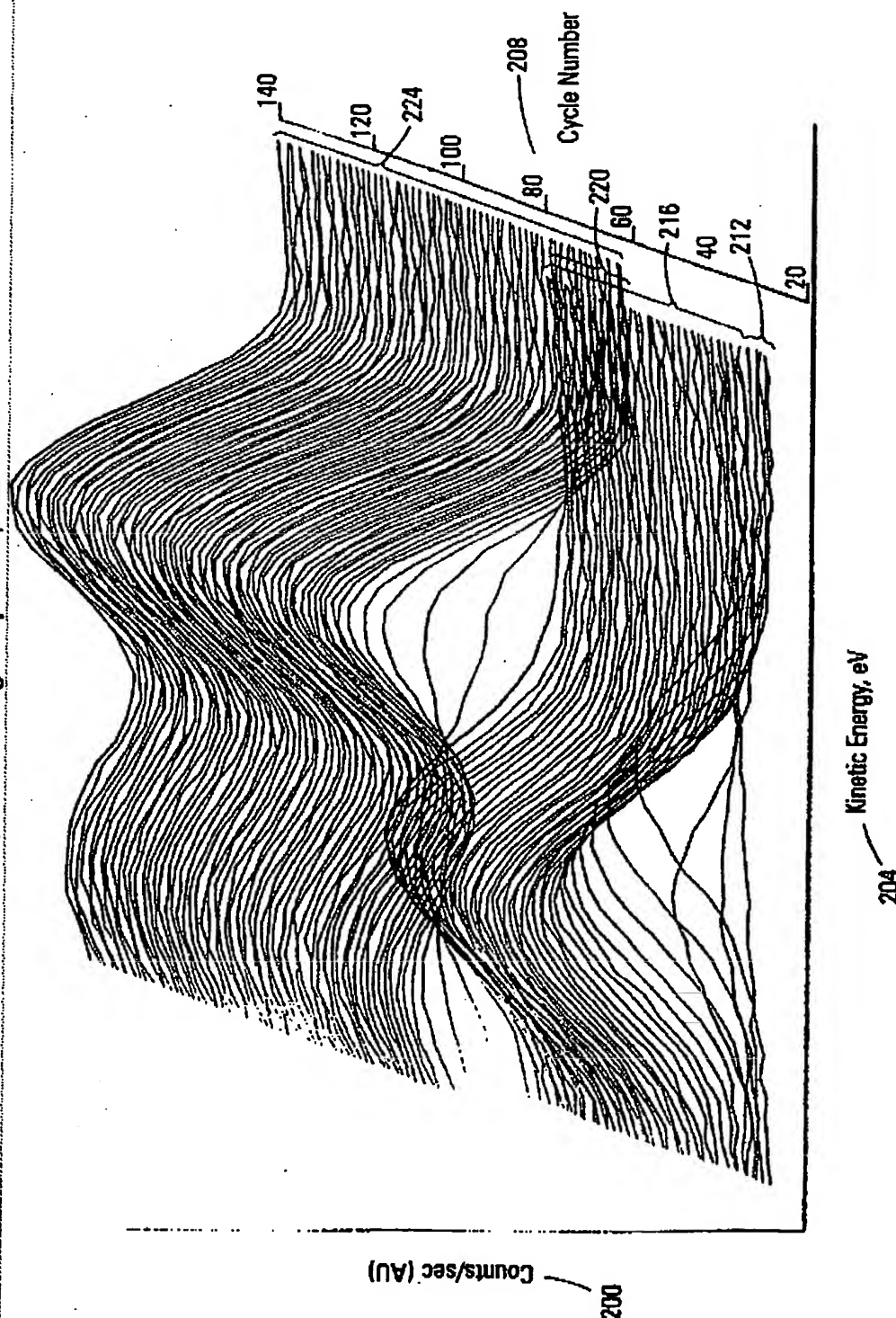


Fig. 1
(Prior Art)

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Spectra for Depth Profile of Charging SiO_2 on Si
(Si KLL Auger Spectra)*Fig. 2*
(Prior Art)

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Profiles of Scaled Target-Factor Weighting Factors from Factor Analysis of Uncompensated Auger Spectra from Charging SiO_2 on Si Substrate

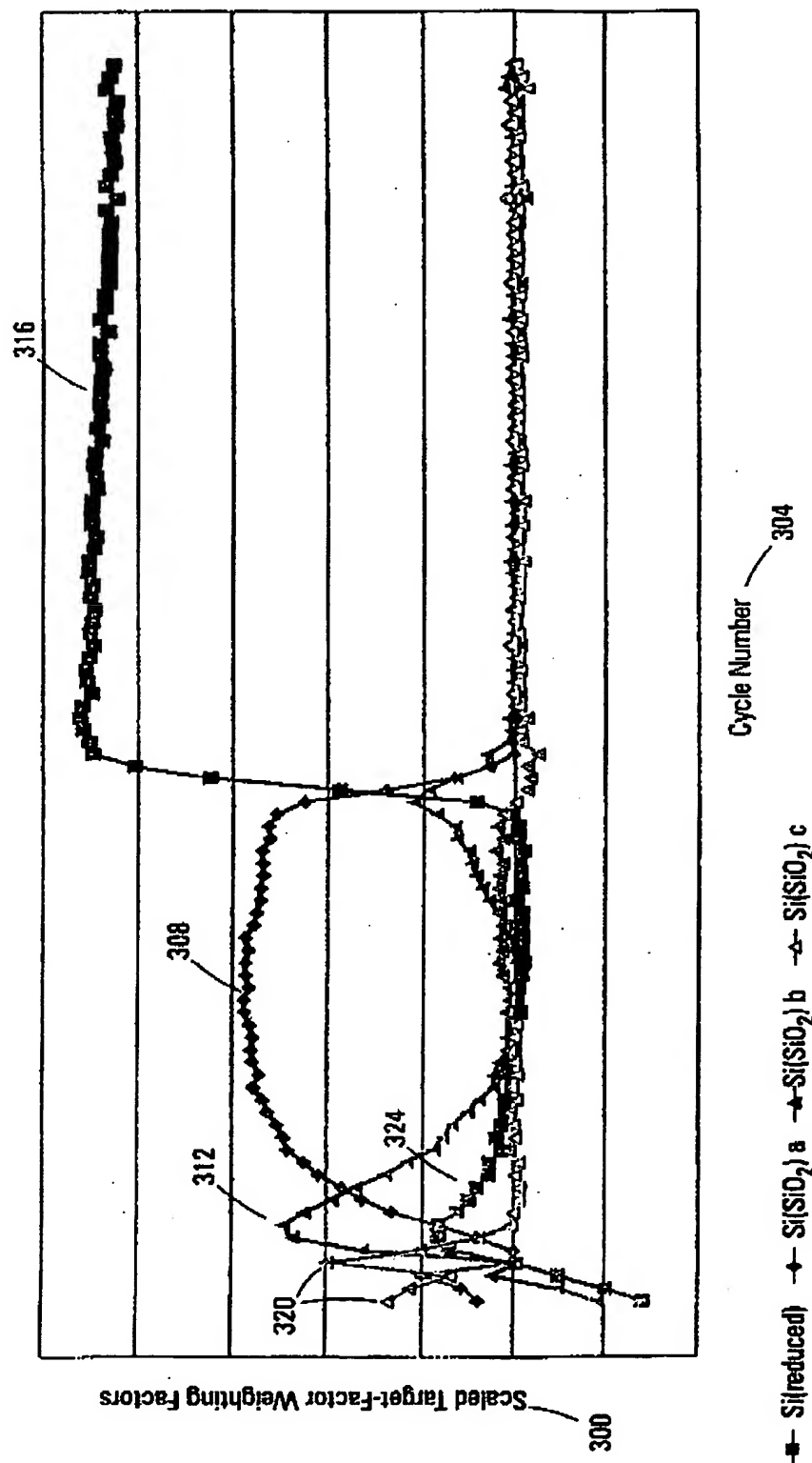


Fig. 3
(Prior Art)

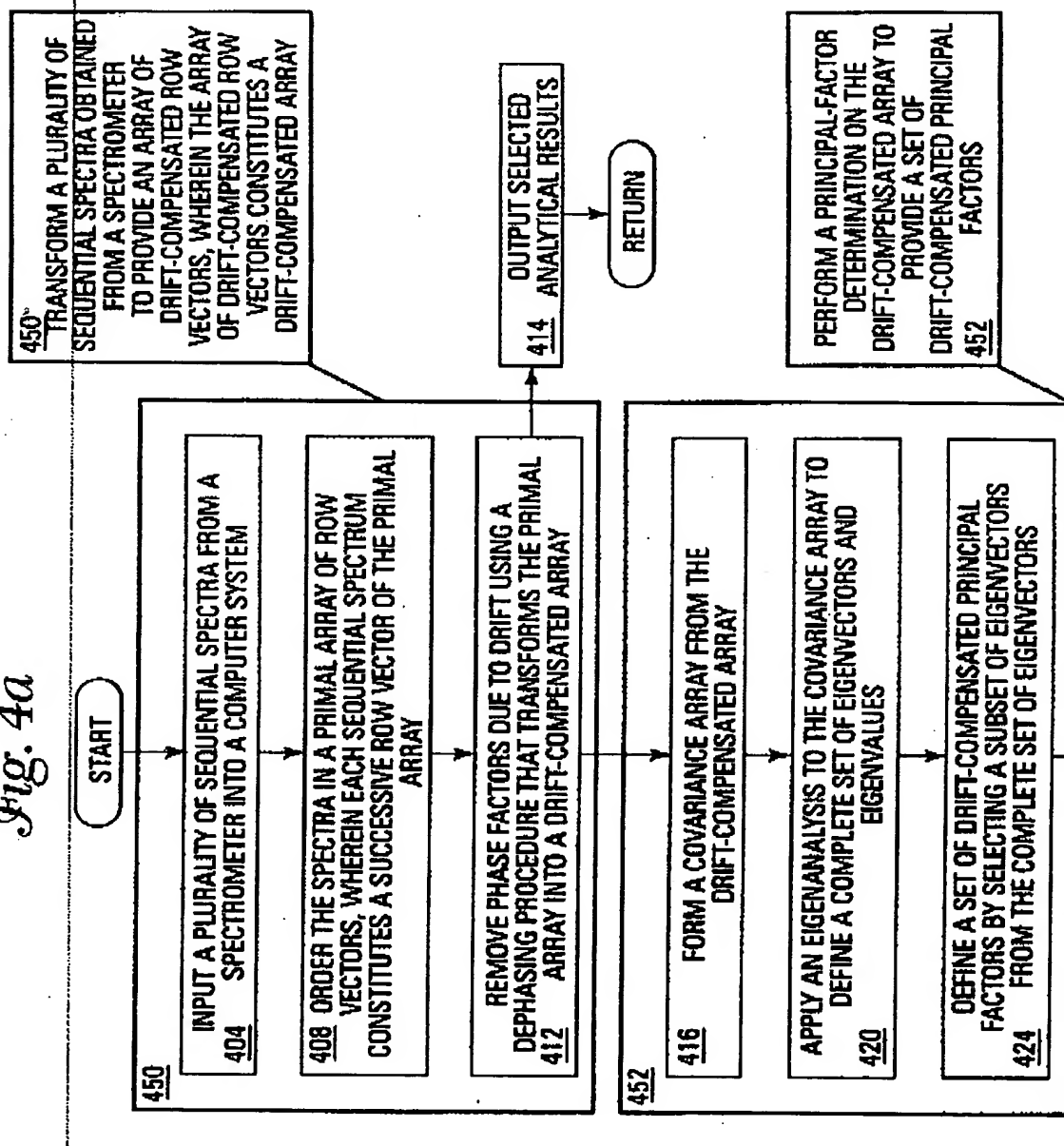
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Fig. 4a



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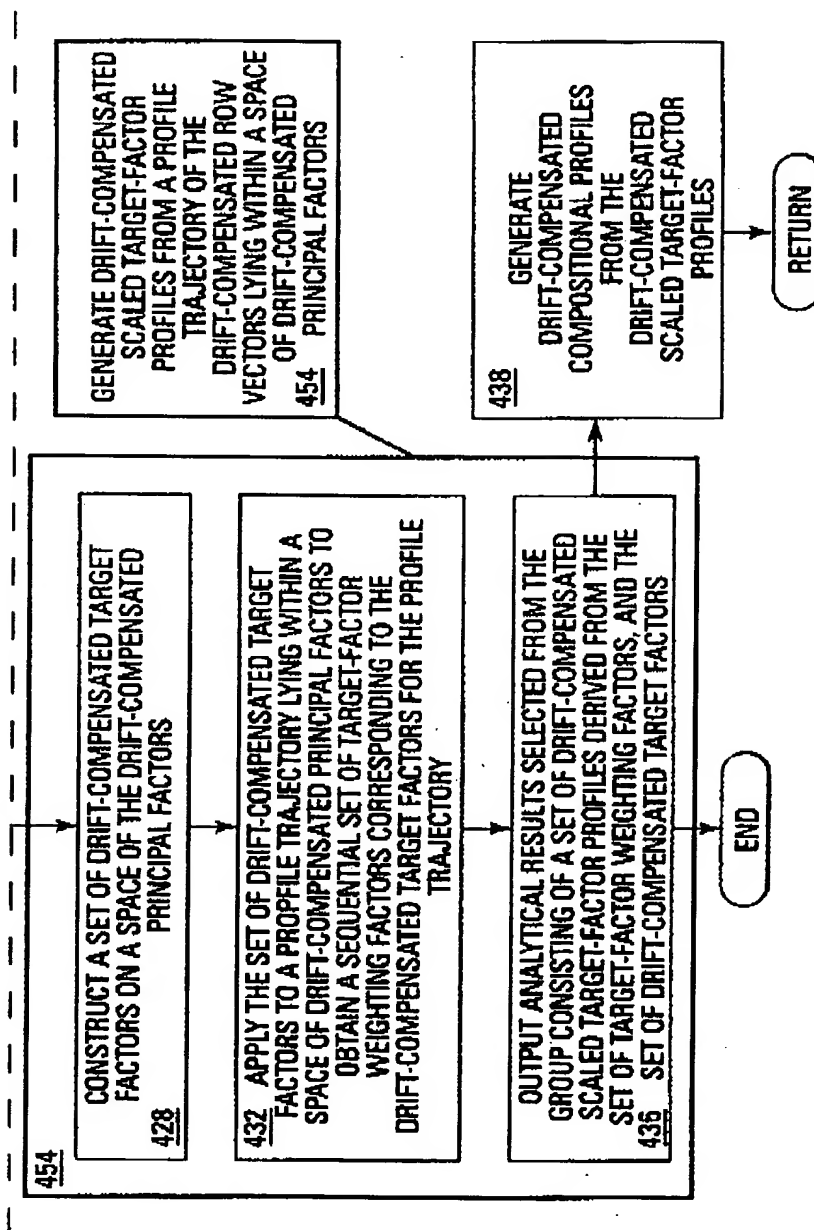


Fig. 4b

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Moduli of Fourier-transformed Spectra
for Depth Profile of Charging SiO_2 on Si

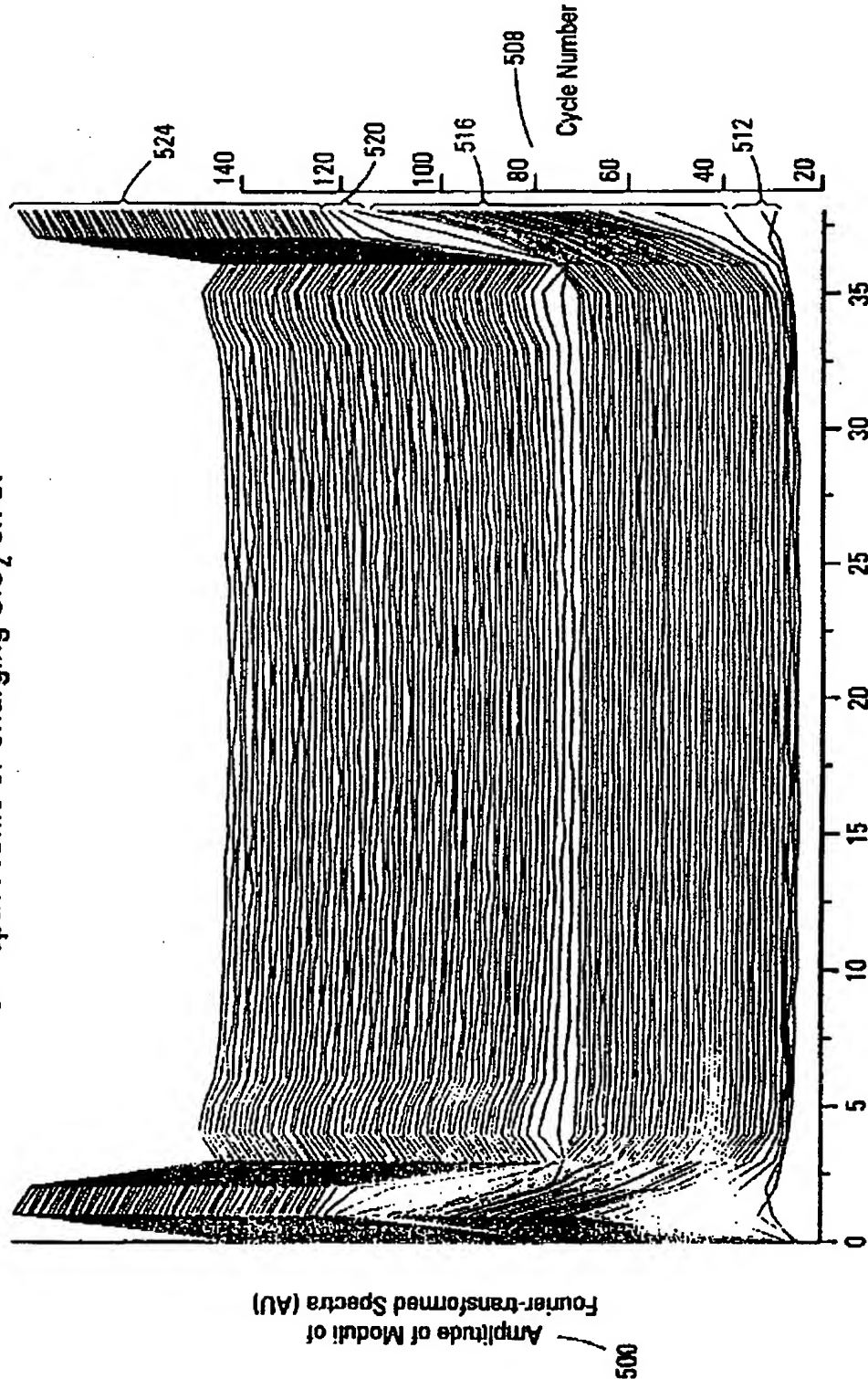


Fig. 5

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Profiles of Scaled Target-Factor Weighting Factors from Factor Analysis of Moduli of Fast-Fourier-Transformed Auger Spectra from Charging SiO_2 on Si Substrate

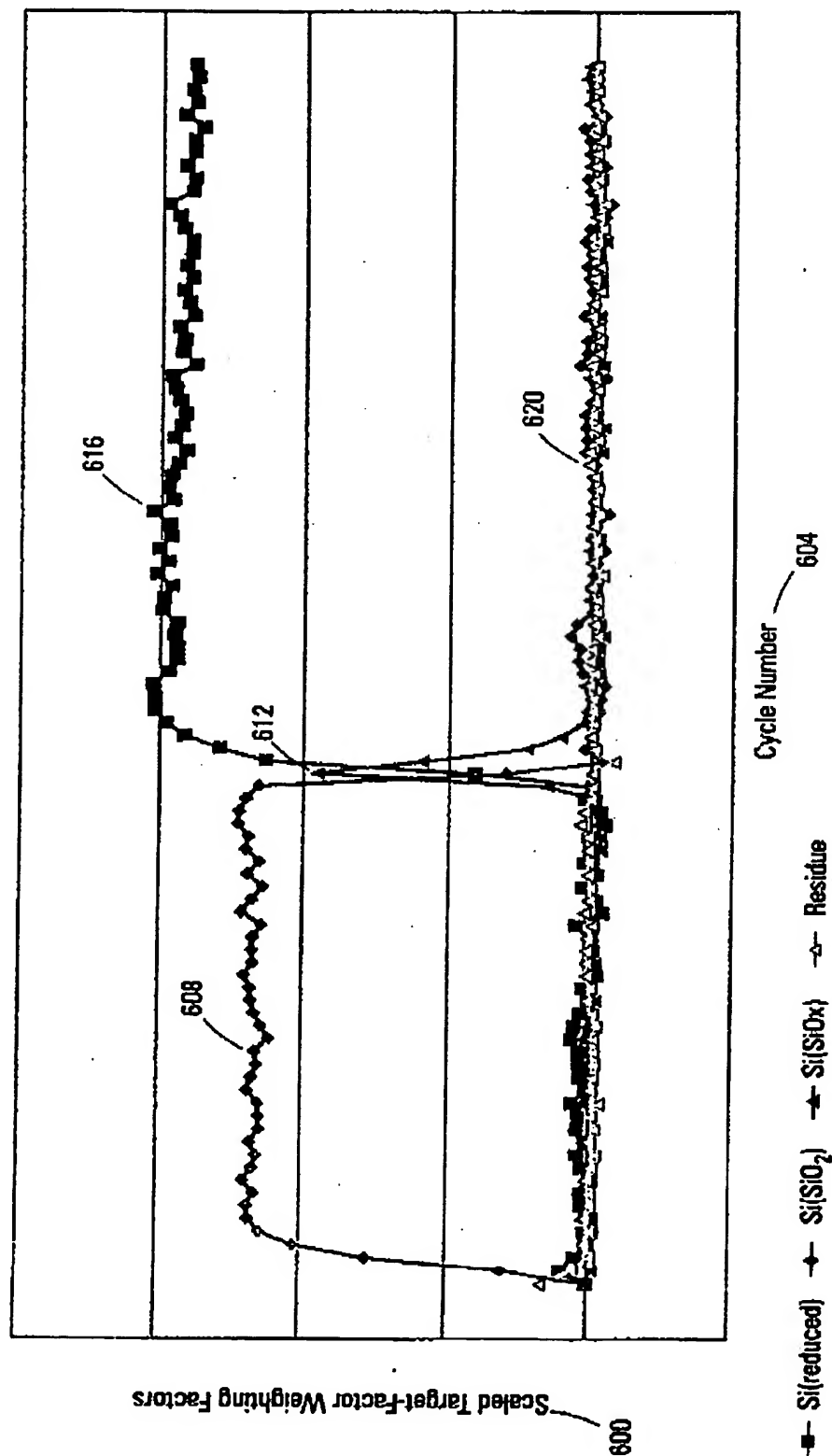
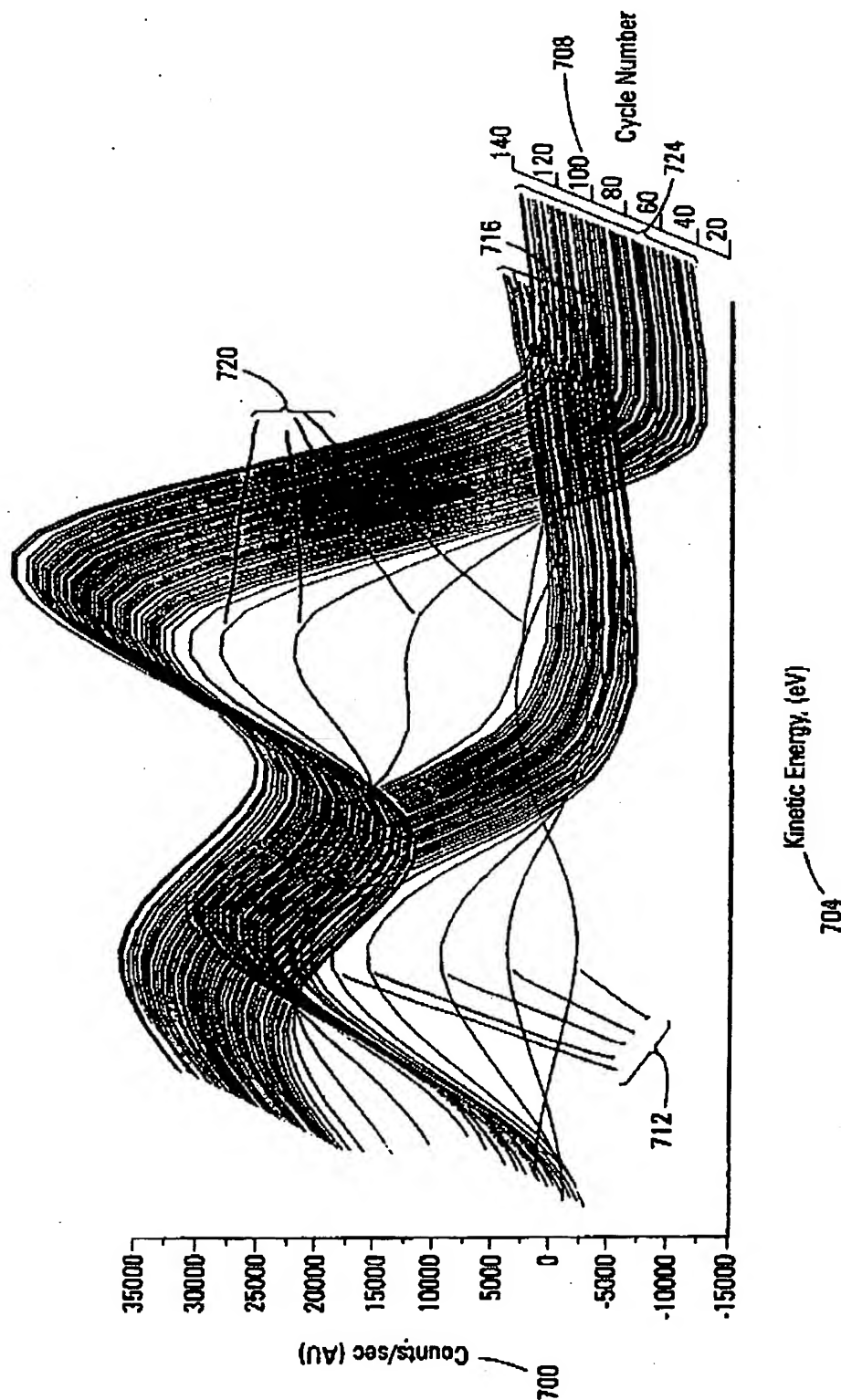


Fig. 6

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Drift-Compensated Spectra Synthesized from Selected Reference Spectra Fit to Primal Spectra for Depth Profile of Charging SiO₂ on Si



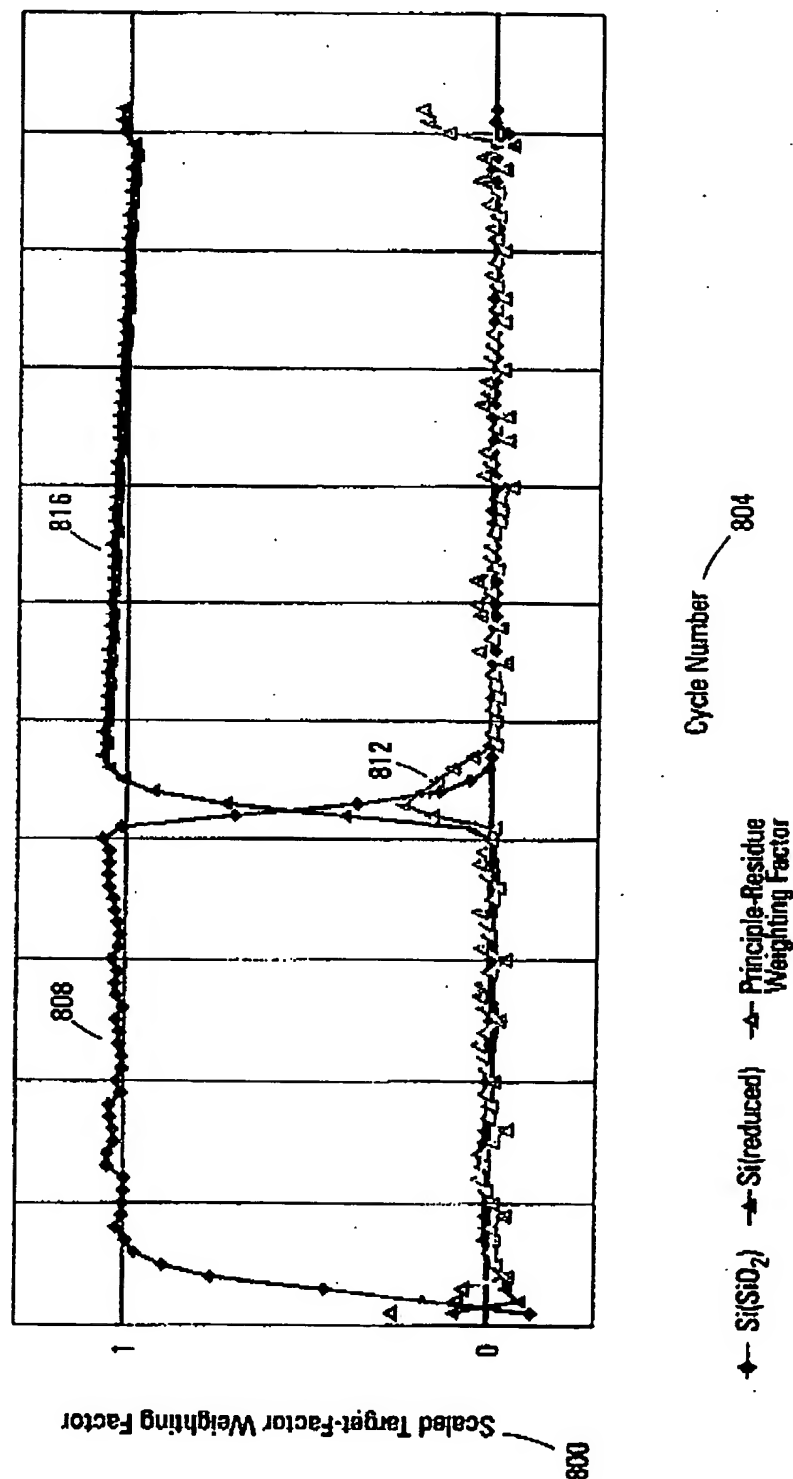
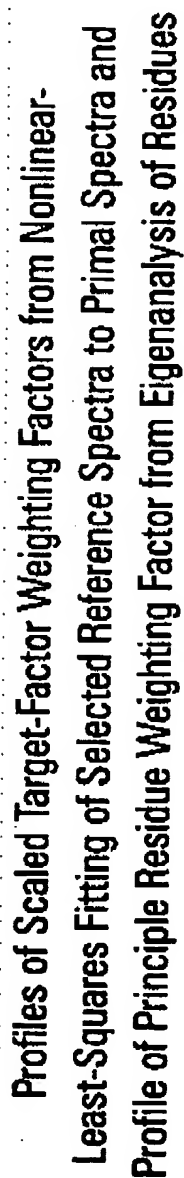
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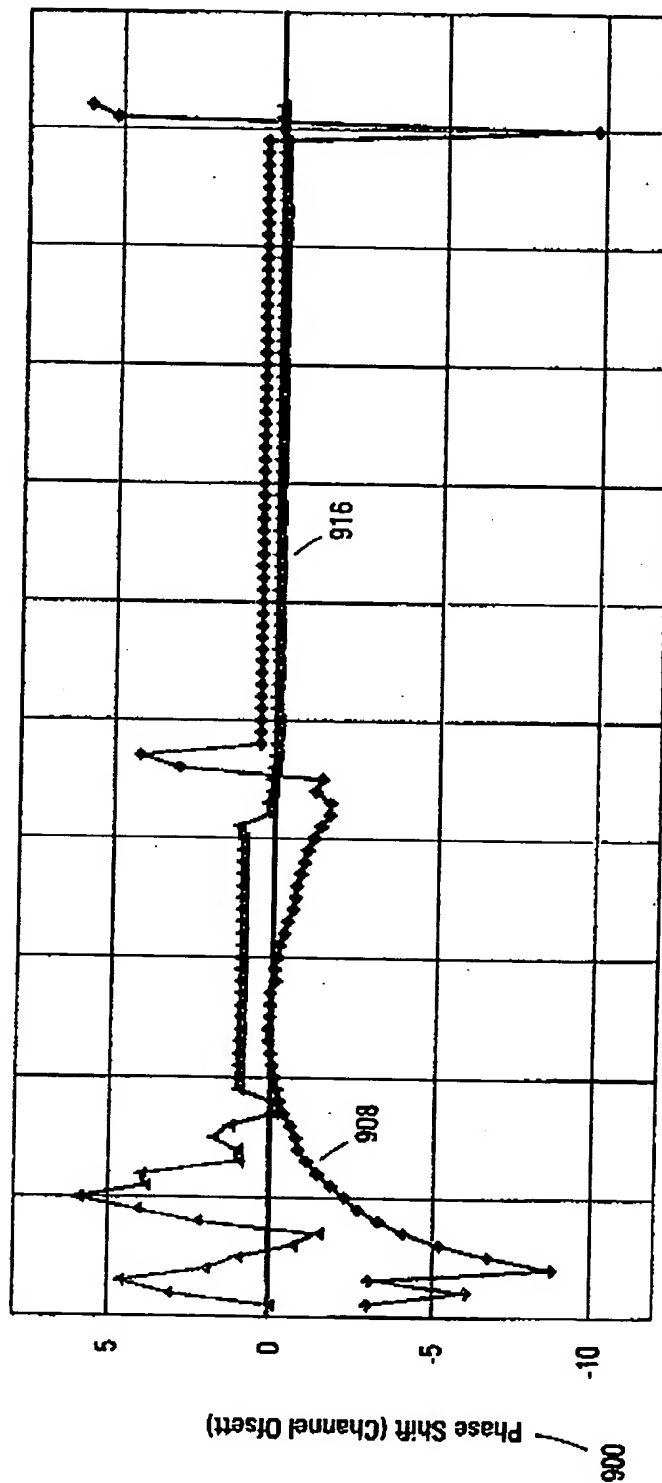
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Profiles of Phase Factors for Selected Reference
Spectra Obtained from Fitting to Primal SpectraCycle Number — 904
Fig. 9◆ — Si(SiO₂) ■ — Si(reduced)

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AND PROFILES DERIVED THEREFROM FOR EFFECTS OF DRIFT

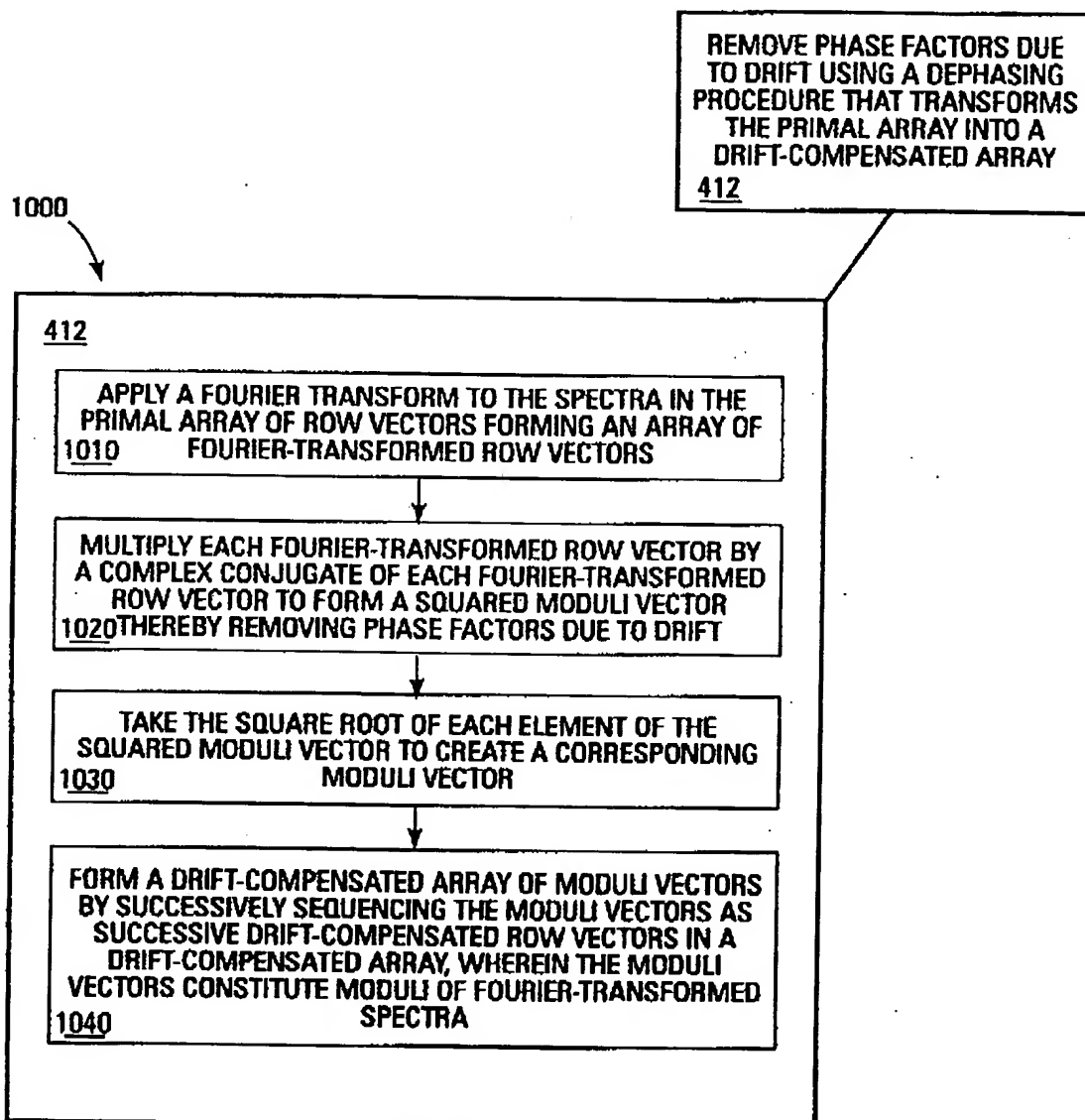
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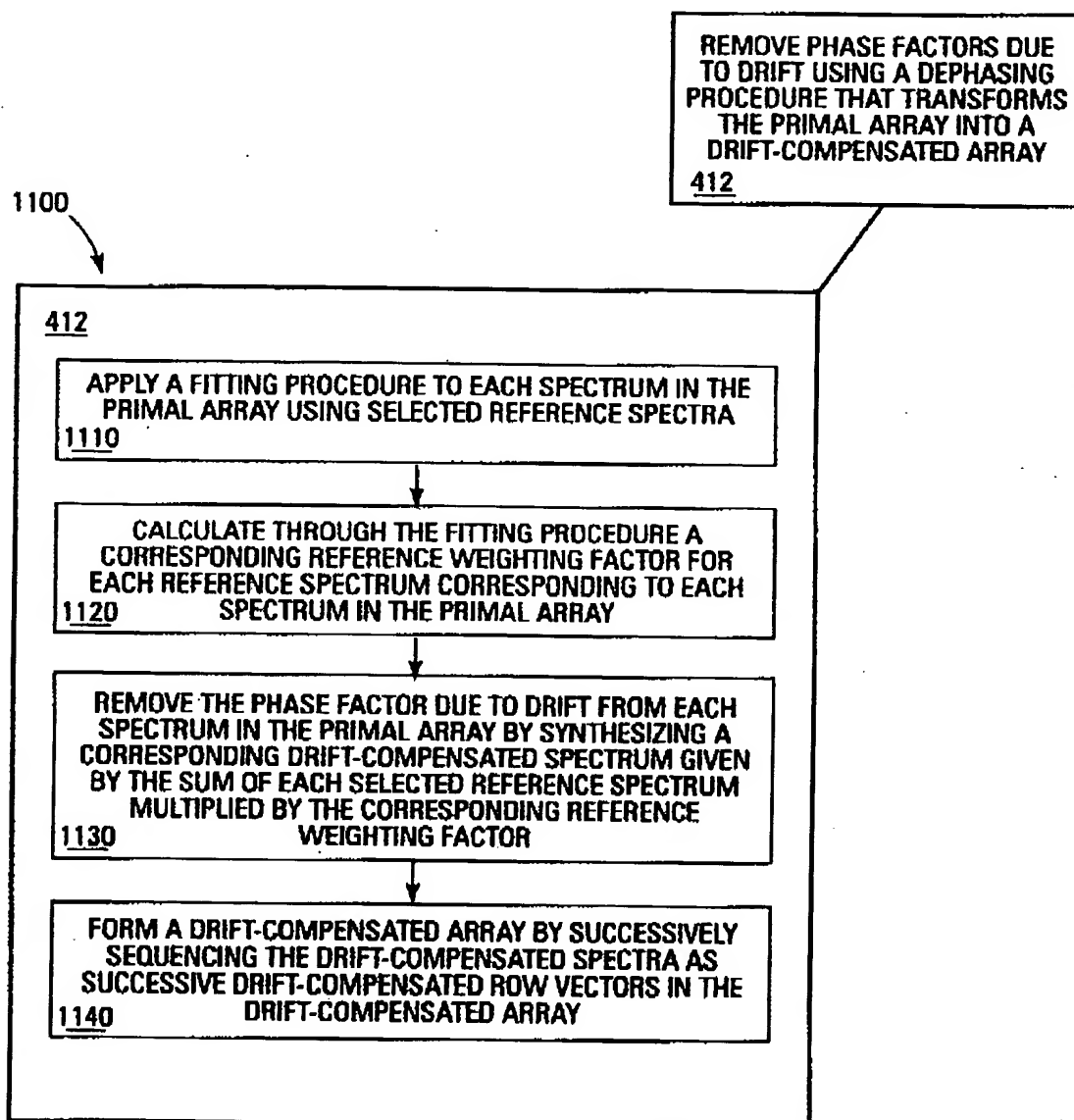
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*Fig. 10*

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*Fig. 11*

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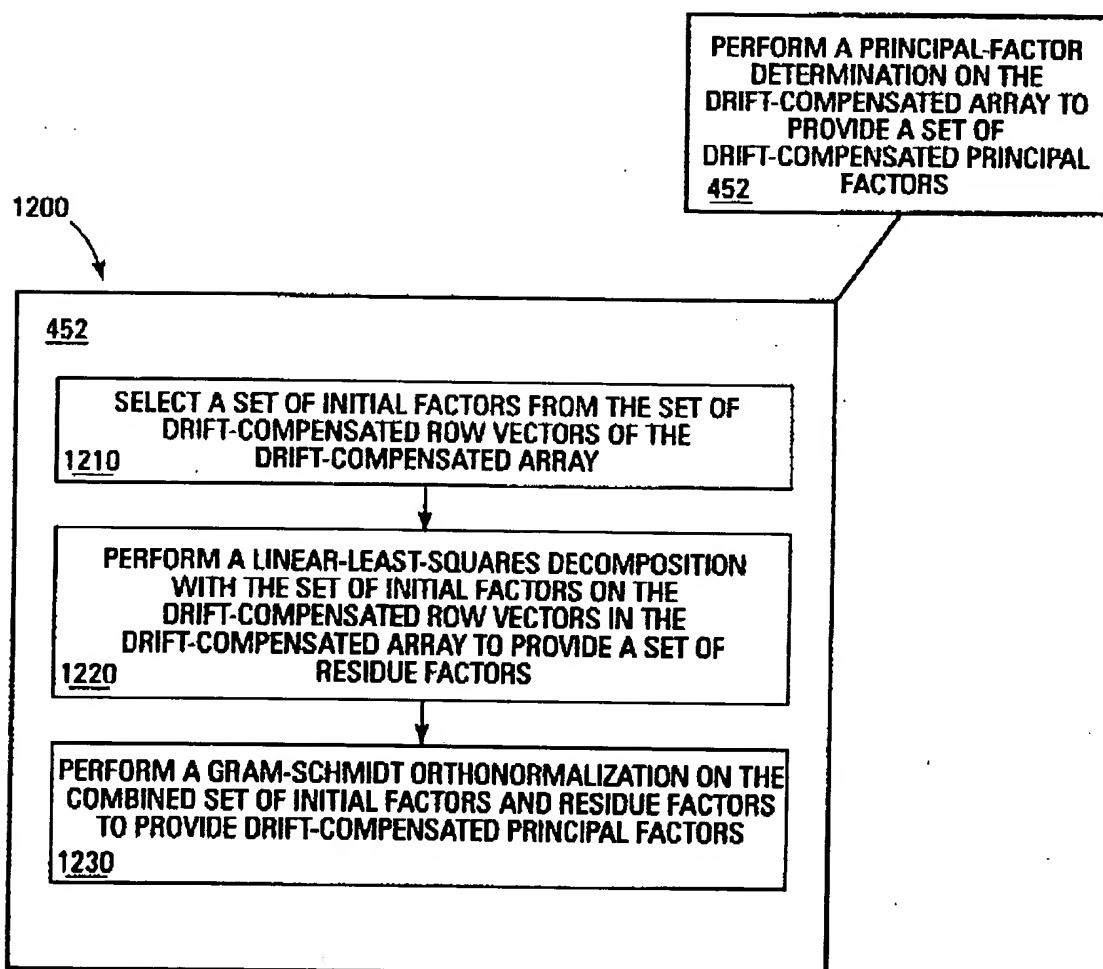


Fig. 12

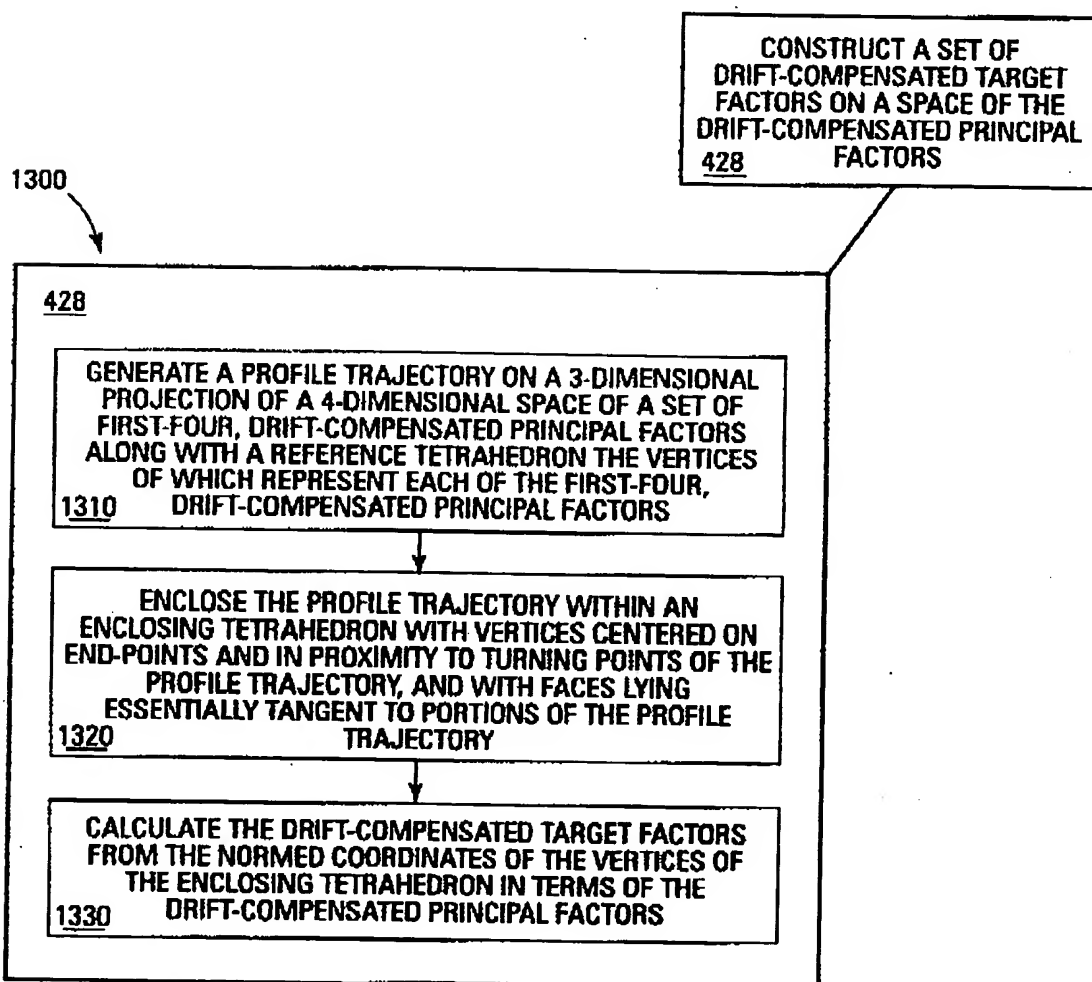
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*Fig. 13*

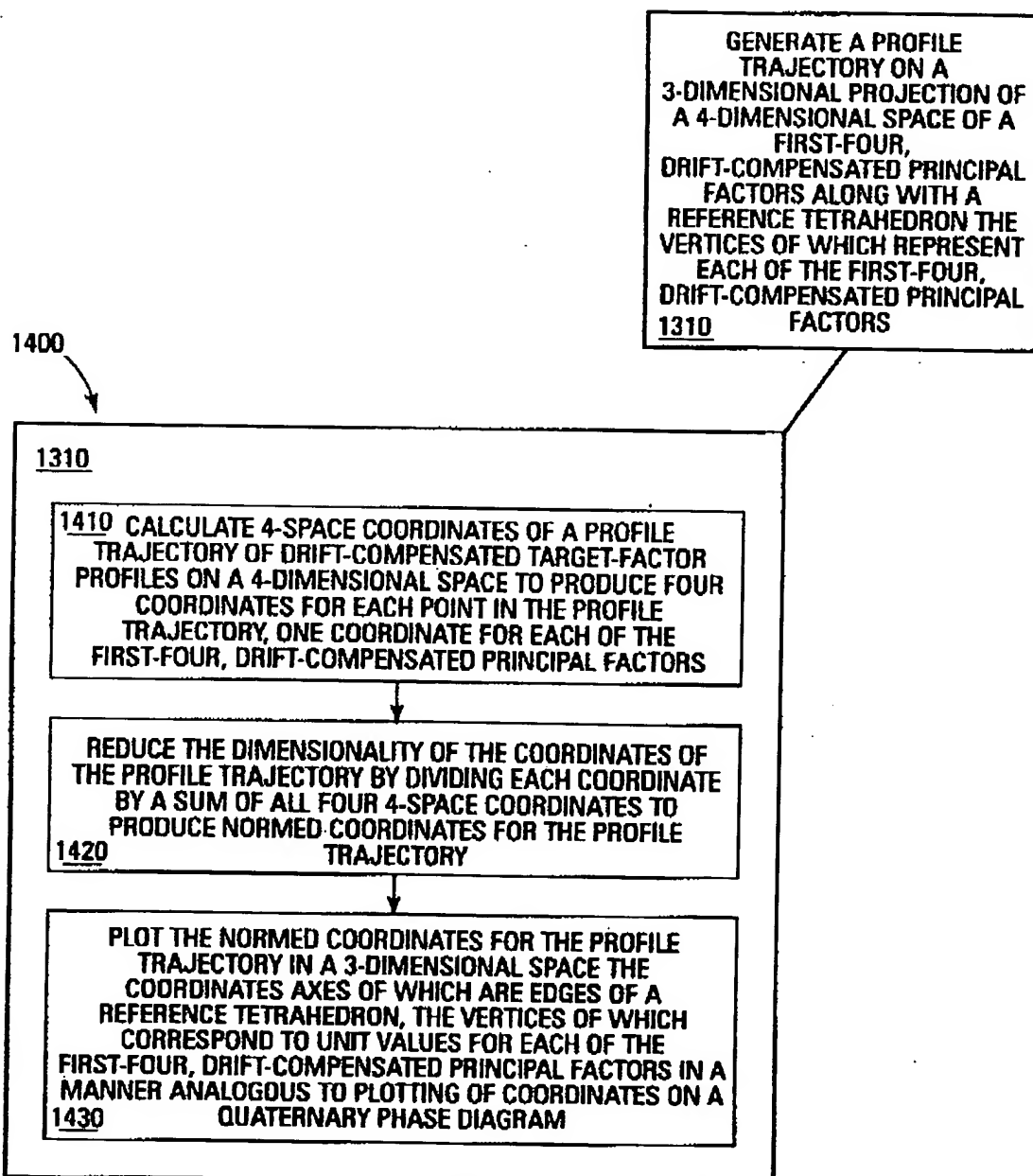
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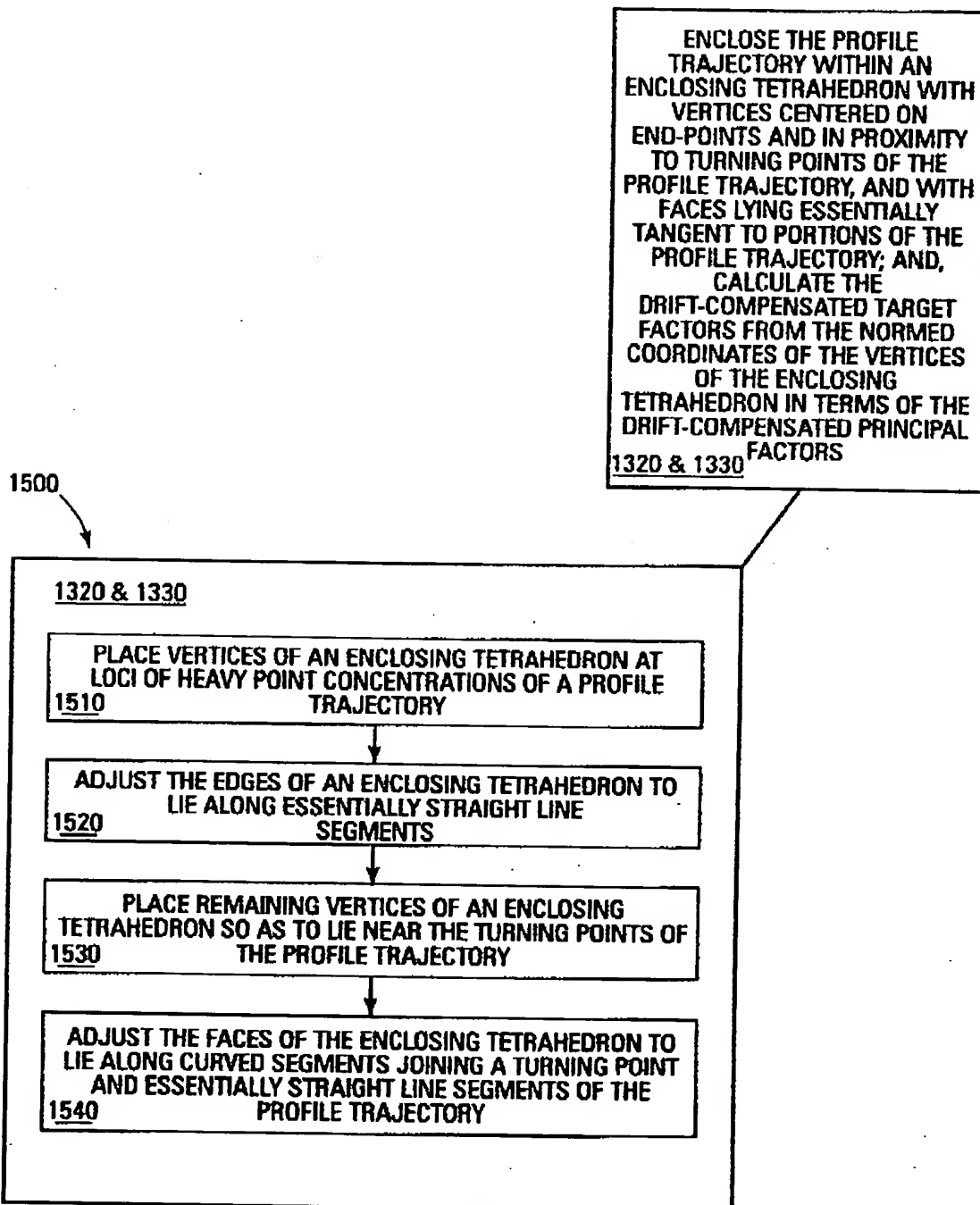
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*Fig. 14*

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*Fig. 15*

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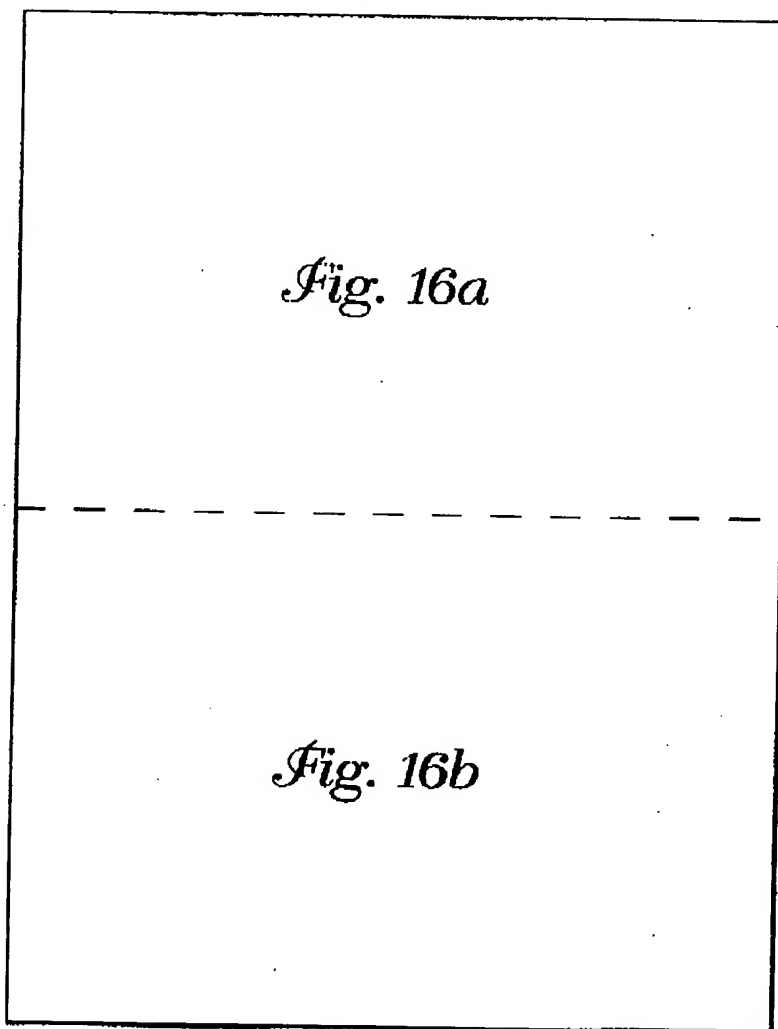
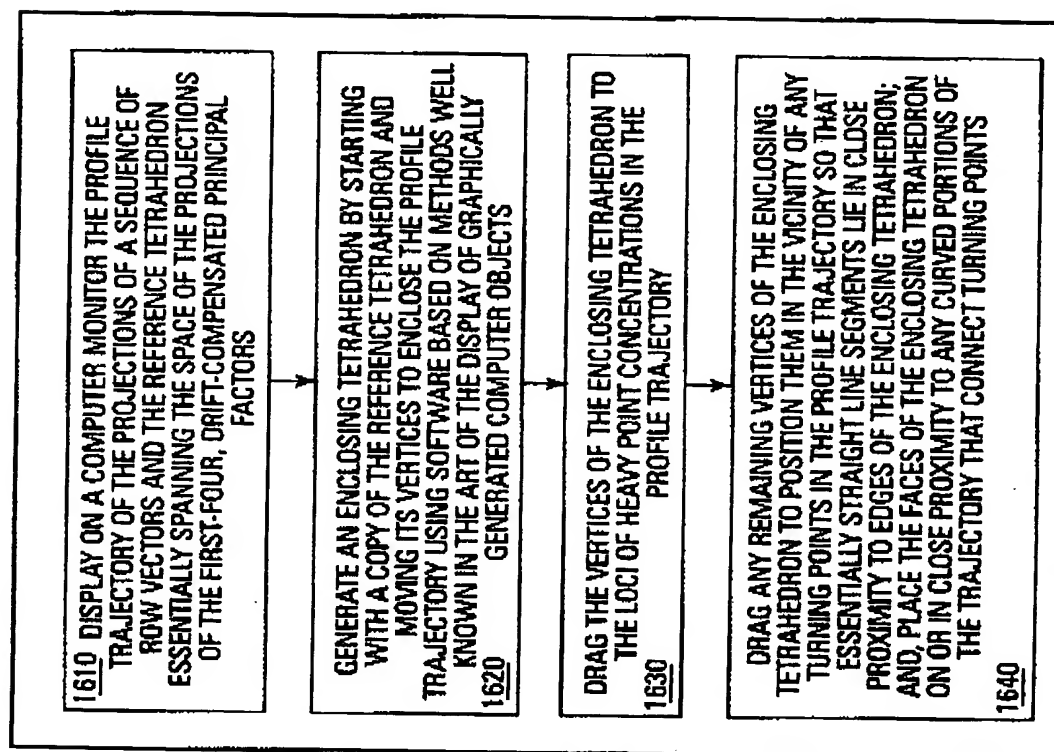


Fig. 16

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Fig. 16a



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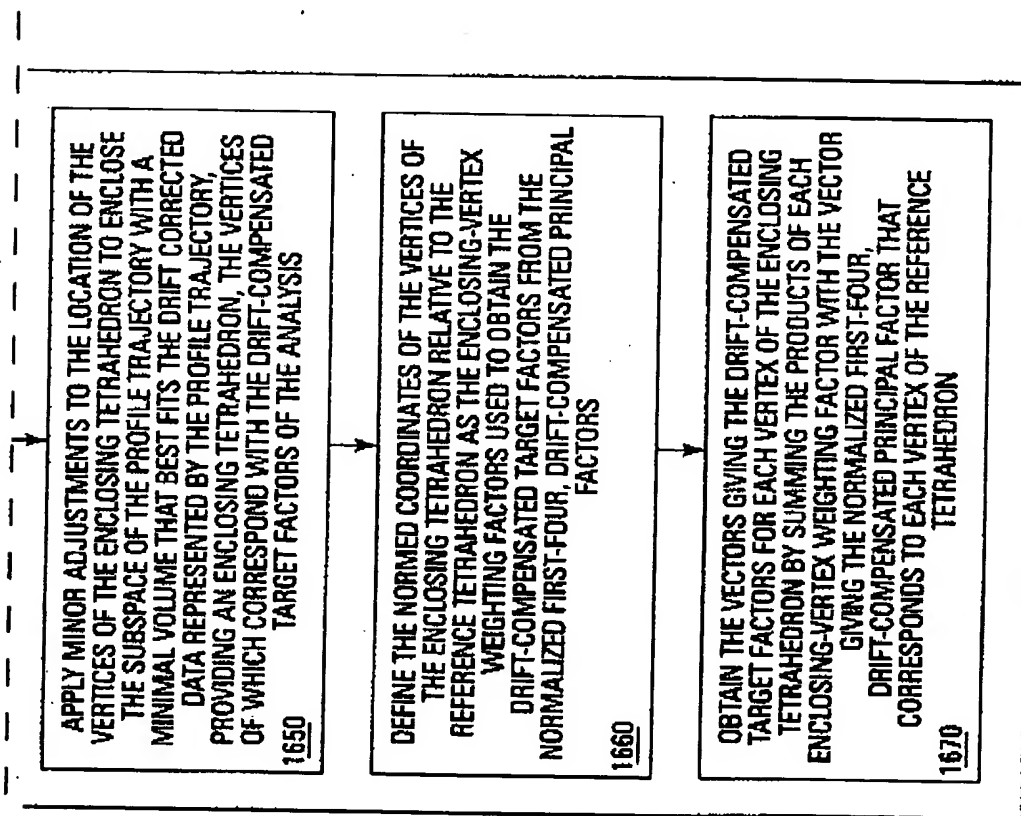


Fig. 16b

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Fig. 17

Fig. 17a

Fig. 17b

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OUTPUT ANALYTICAL RESULTS
SELECTED FROM THE GROUP
CONSISTING OF A SET OF
DRIFT-COMPENSATED SCALED
TARGET-FACTOR PROFILES
DERIVED FROM THE SET OF
TARGET-FACTOR WEIGHTING
FACTORS, AND THE SET OF
DRIFT-COMPENSATED TARGET
FACTORS

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Fig. 17a

OBTAIN THE SET OF DRIFT-COMPENSATED TARGET-FACTOR
PROFILE VALUES BY APPLYING THE SET OF
DRIFT-COMPENSATED TARGET FACTORS TO THE PROFILE
TRAJECTORY BY ASCERTAINING THE NORMED
COORDINATES OF EACH POINT ON THE PROFILE
TRAJECTORY, I.E. THE TARGET-FACTOR WEIGHTING
FACTORS, FROM THE ENCLOSING TETRAHEDRON IN A
MANNER ANALOGOUS TO FINDING COORDINATES OF A
POINT ON A QUATERNARY PHASE DIAGRAM

1710

COMPOSE A REFERENCE VECTOR BY SUMMING THE
PRODUCTS FROMED BY MULTIPLYING THE VECTORS
CORRESPONDING TO THE DRIFT-COMPENSATED TARGET
FACTORS BY THE TARGET-FACTOR WEIGHTING FACTORS,
FOR EACH POINT ON THE PROFILE TRAJECTORY

1720

SCALE THE AMPLITUDE OF THE RESULTING REFERENCE
VECTOR TO OPTIMALLY MATCH THE CORRESPONDING ROW
VECTOR COMPENSATED FOR THE EFFECTS OF DRIFT

1730

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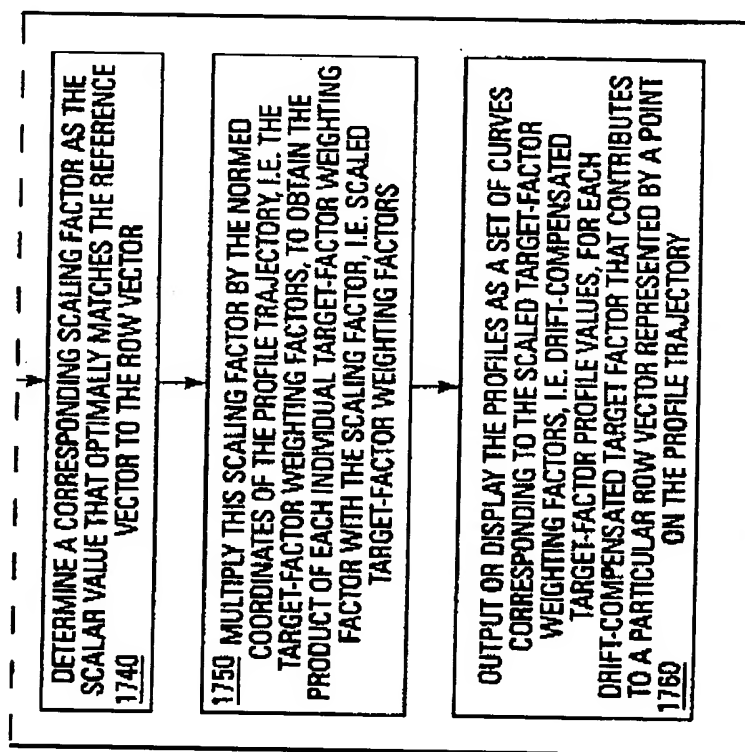
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Fig. 17b

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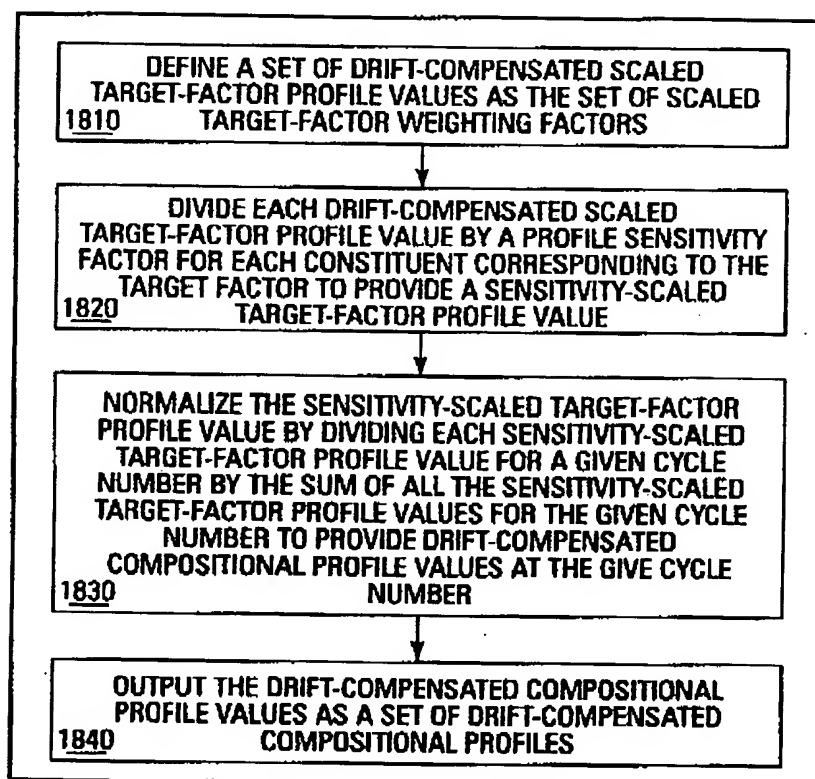
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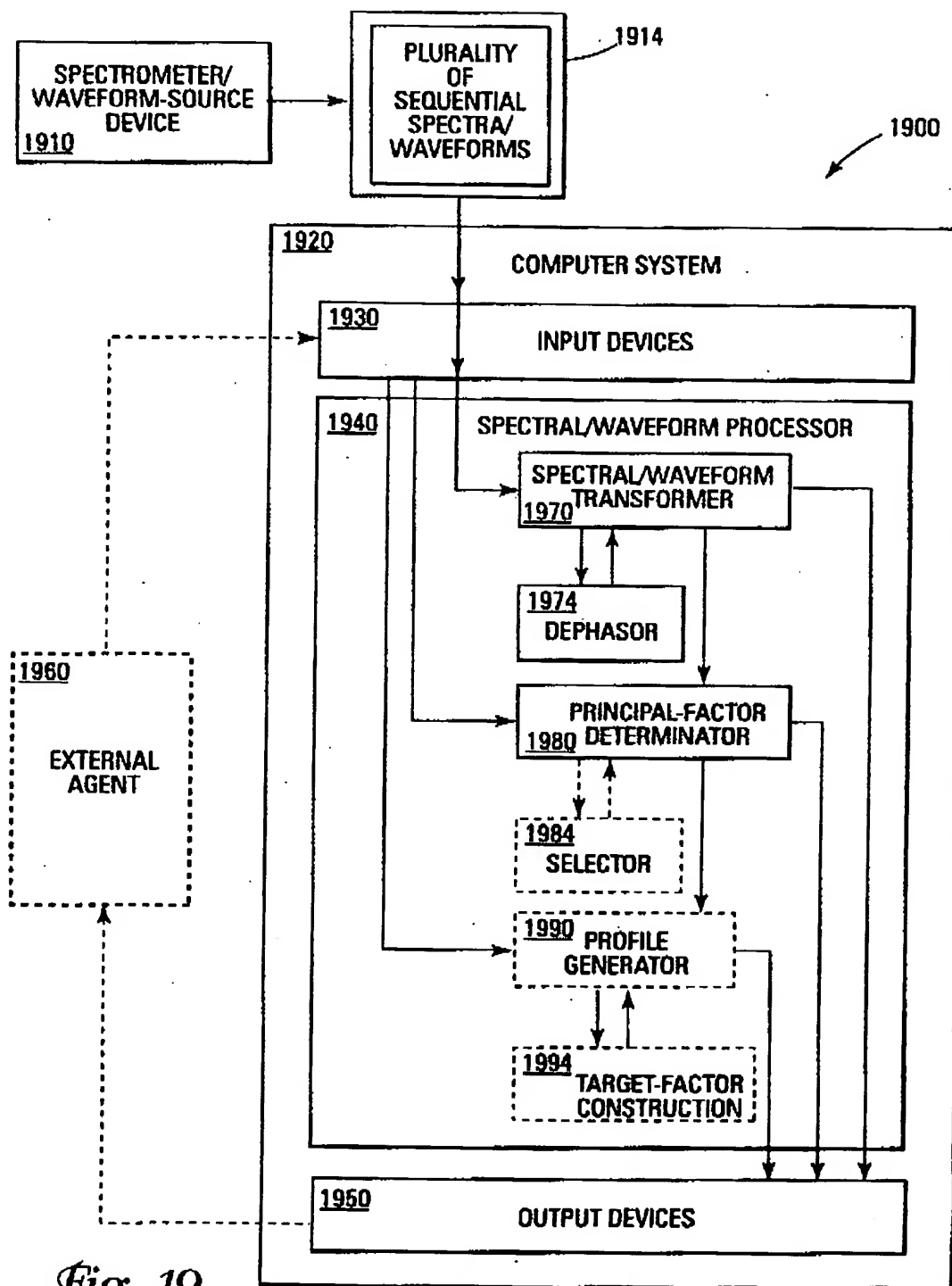
*Fig. 18*

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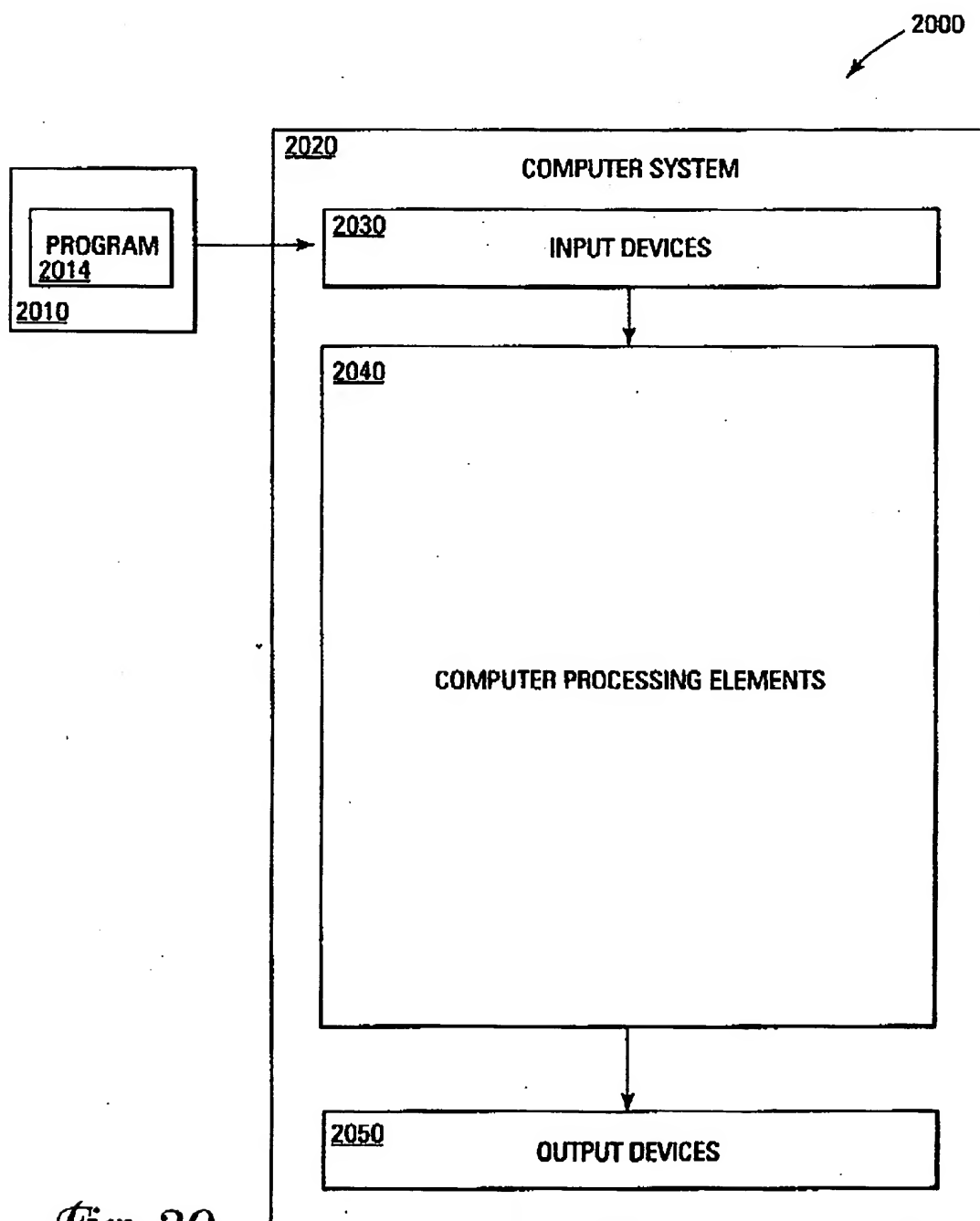


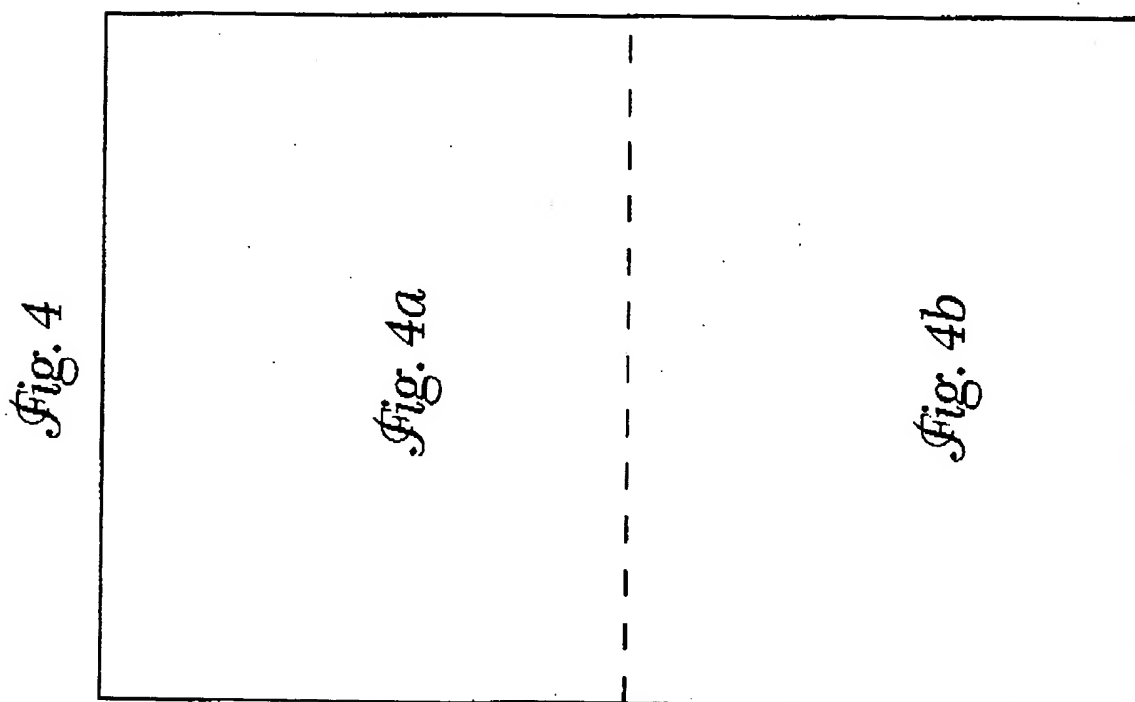
Fig. 20

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